

# LAND RECLAMATION COMMISSION

STATE OF MISSOURI

P.O. BOX 176  
JEFFERSON CITY, MISSOURI 65102  
573-751-4041

## Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO

THE DOE RUN COMPANY

Pursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements

In the application, a permit is hereby granted to engage in surface mining of  
limestone in the state of Missouri. The extent of the

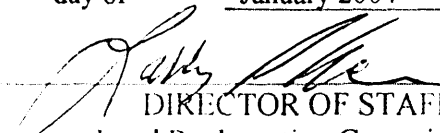
Proposed mining operation(s) will be on five acres, more or less.

The locations of the operation(s) under this permit is/are as follows: **Renewal**

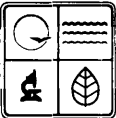
County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
St. Francois	36	37N	04E	5	0	5	BRMT Quarry	0671

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 21st day of January 2004

  
\_\_\_\_\_  
DIRECTOR OF STAFF  
Land Reclamation Commission

Permit No. 0708  
Effective Date 01/30/2004  
Expiration Date 01/29/2005



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**PERMIT RENEWAL FOR INDUSTRIAL MINERAL MINES**

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JAN 12 2004

P.O. BOX 176  
JEFFERSON CITY, MO 65102-0176

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL The Doe Run Company		MISSOURI LAND RECLAMATION COMMISSION DATE December 22, 2003	
ADDRESS PO Box 500	CITY Viburnum	STATE MO	ZIP CODE 65566
CONTACT PERSON John E. Carter		TELEPHONE NUMBER 573-244-8152	

**FEES: COMPLETE SECTION I OR SECTION II**

**SECTION I. Fees: Open pit operators and those mining more than 5,000 tons of sand and/or gravel:**

1. To compute the site fee complete the information below:

SITE NAME OR NUMBER (add a separate sheet for additional sites)	Mark each month that the site will be operated during the permit year	For sites operated less than six months per permit year pay \$150 For sites operated six months or more per permit year pay \$300
1. Big River Mine Tailings Site Quarry #0708	Jan, Feb, Mar, Apr, <u>May, Jun, Jul, Aug, Sep</u> , Oct, Nov, Dec	\$ 150
2.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
3.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
4.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
5.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
6.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
7.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
8.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
9.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
10.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
TOTAL SITE FEE		\$ 150

2. Acreage Fee \$5 X 5.0 number of acres bonded .....\$ 25

3. Annual Permit Fee .....\$ 500

4. Total Fee (Add totals from 1, 2 and 3) .....\$ 675

NOTE: If Total Fee exceeds \$2,500.00 then pay only .....\$ 2,500

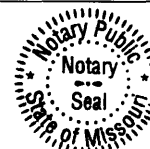
**SECTION II. FEES: Sand or gravel operators mining less than 5,000 tons per year:**

1. Annual Permit Fee .....\$ 300

SIGNATURE OF APPLICANT <i>John E. Carter</i> John E. Carter	TITLE Manager, Mining Properties Maintenance and Restoration	DATE <i>01/07/04</i>
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Appeared before me this 6th day of January, 2004,  
to me personally known, who executed the above as their free acts and deeds.

NOTARY PUBLIC EMBOSSEY SEAL	STATE OF <u>Missouri</u>	COUNTY (OR CITY OF ST. LOUIS) <u>St Francois</u>
	SUBSCRIBED AND SWORN BEFORE ME, THIS <u>6th</u> DAY OF <u>January</u> YEAR <u>04</u>	USE RUBBER STAMP IN CLEAR AREA BELOW.
	NOTARY PUBLIC SIGNATURE <i>Tina M Miller</i>	MY COMMISSION EXPIRES <u>11/24/06</u>
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <u>tina m miller</u>	



TINA M. MILLER  
St. Francois County  
My Commission Expires  
November 24, 2006

FOR DEPARTMENT USE ONLY: APPROVED BY <i>[Signature]</i>	DATE APPROVED <u>1-14-04</u>	PERMIT NUMBER <u>0708</u>	EXPIRATION DATE <u>1-29-2005</u>
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**SITE INFORMATION FORM**

**RECEIVED**  
MAY 04 1999

MISSOURI LAND  
RECLAMATION COMMISSION

To be completed for each separate area of disturbance associated with mining operations

SITE NAME OR NUMBER <b>BRMT Quarry</b>		PERMIT NUMBER <b># 0708</b>	
COMPANY NAME <b>The Doe Run Company</b>			
COUNTY <b>St. Francois</b>	1/4 SECTION <b>NW 1/4</b>	SECTION <b>36</b>	
TOWNSHIP <b>37N</b>	RANGE <b>4E</b>	ACRES <b>5.0</b>	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES) <b>N/A</b>			
MINERAL COMMODITY <b>Limestone</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES) <b>N/A</b>	

NAME OF LANDOWNER (ATTACH LIST IF MORE THAN ONE) <b>St. Francois County Environmental Authority</b>		
ADDRESS <b>#9 Bennett St.</b>		
CITY <b>Park Hills</b>	STATE <b>MO</b>	ZIP CODE <b>63601</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____		DATE OF AGREEMENT <b>12/18/95</b>
<input type="checkbox"/> LEASE <input checked="" type="checkbox"/> VERBAL AGREEMENT		

MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>Same as above.</b>		
ADDRESS		
CITY	STATE	ZIP CODE
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____		DATE OF AGREEMENT
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		

**NOTE:** Each site must be shown on a map and be included in a public notice and an approved mine plan.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**MINE PLAN**

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MISSOURI LAND  
RECLAMATION COMMISSION P.O. BOX 176  
JEFFERSON CITY, MO 65102

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

COMPANY NAME The Doe Run Company

☒ LONG TERM, FOR PERIOD THROUGH DATE: January 28, 2006

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.

This quarry is not a commercial quarry operation. The purpose of the quarry is to provide onsite rock from the Derby Limestone formation to be utilized as rip-rap material for remediation of erosion of mine tailings into the Big River.

This plan covers the original permitted area of approximately 3.0 acres, as well as an expansion of approximately 2.0 acres to the original permit. (See Site Detail Map.) Prior to quarry operations, the area drained to the southwest. The existing quarry slopes to the northwest and is free draining. The expansion will also be free draining towards the northwest.

The quarry is located near a large lead mine tailings area. The quarry is also located near a sanitary landfill (now closed) which was operated in a portion of the mine tailings. All top soil and unconsolidated overburden was removed from the eastern portion of the permitted area, as well as the expanded area and utilized as soil cover material for the sanitary landfill.

The remainder of the original permit area had rock exposed with minimal thickness of unconsolidated material and no recoverable topsoil.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

A. TOPSOIL

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

0

INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES OR ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Not applicable to this site. No topsoil or unconsolidated material meeting the topsoil handling requirements of 10 CSR 40-10.050(6) exists within the mine plan area.

SCS Surveys are not relevant to this site because of the topographic conditions and past onsite construction activities. Please refer to the accompanying "Unconsolidated Material Description for BRMT Quarry." This report was prepared in 1995 and submitted as part of the original permit application. The report is still applicable to current site conditions.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Not applicable.

**B. SPOIL**

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

MISSOURI LAND  
RECLAMATION COMMISSION

Since the purpose of the quarry is to provide rip-rap material and not a high quality construction stone and no recoverable unconsolidated overburden exists, it is expected that very little, if any, spoil material will be created. No spoil material has been created during operations to date.

In the event spoil material is created, the spoil material will be placed in the area designated a spoil area and graded, as much as the material allows, to a traversable slope. It is not expected that enough fines will be recoverable to support vegetation.

**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None.

**D. PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)**

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

The current quarry area is oriented in a north-south direction. The expansion will begin at the south edge of the originally permitted area and proceed in a south and southeast direction (see Detail Map). Storm water run-on is intercepted and diverted north of the quarry by construction of a storm water diversion structure east of the quarry. The original permitted quarry, as well as the expansion area, will be excavated to be free draining to the northwest.

YES NO

☐ ☒ Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐ ☒ Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐ ☒ Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1

#1

PURPOSE OR LAND USE

Erosion Control/Landscaping

B. SEEDING OR PLANTING TIME

Spring (March 15-May 15)

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

The pre-existing quarry condition did not include a sufficient depth of topsoil or unconsolidated overburden material to be recoverable and segregated for use as a vegetative layer. Therefore, no revegetation plan is provided since no soil material is available as a vegetation base. It is not expected that a sufficient volume of fines, capable of supporting vegetation, will be contained in any spoil material. However, in the event spoil material is available and capable of supporting vegetation, the following revegetation plan is provided: During the spring following final grading with spoil material adequate to support vegetation, the area will be seeded by hand broadcasting and lightly covered.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Emerald Crown Vetch	4-6		

REVEGETATION MIX #2

PURPOSE OR LAND USE

B. SEEDING OR PLANTING TIME

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE

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ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

The only grading applicable to the quarry operation will be to ensure that the base of the quarry generally slopes to the northwest to provide drainage away from the highwall. It is not anticipated that any spoil material will be created. However, in the event that spoil material does exist, the spoil shall be placed in the designated spoil area and graded as much as the material allows, to a traversable slope. All side slopes shall be constructed on a slope no steeper than 3H:1V (horizontal to vertical).

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**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as quarry advances. Final grading will be completed within one year of permit expiration on all mined-out portions.

**REPLACEMENT OF TOPSOIL**

Not applicable.

**REVEGETATION**

Seeding of any areas requiring vegetation will be performed during the first optimum seeding period following final grading with establishment of vegetation within 24 months after permit expiration for the affected area.

**AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)**

Not applicable.

**D. USE OF LAND WHEN RECLAIMED**

Estimate acreage of each land use below, after reclamation

**ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

Agricultural (pasture, cropland, and horticultural)

Development (residential, industrial, and recreational) Utilize area as part of long-term maintenance activities of mine tailing remediation.

5.0

Water impoundments (for wildlife, agricultural, or development)

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

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SIGNATURE OF APPLICANT (John E. Carter) <i>John E. Carter</i>		TITLE Manager, Mining Properties Maintenance & Restoration	DATE 5-3-99
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri	COUNTY (OR CITY OF ST. LOUIS) Cole	
	SUBSCRIBED AND SWORN BEFORE ME, THIS 3rd DAY OF May 1999		USE RUBBER STAMP IN CLEAR AREA BELOW MARTHA S. SIEGEL Notary Public - Notary Seal STATE OF MISSOURI Callaway County My Commission Expires Jan. 1, 2001
	NOTARY PUBLIC SIGNATURE <i>Martha S. Siegel</i>	MY COMMISSION EXPIRES 1-1-2001	
	NOTARY PUBLIC NAME (TYPED OR PRINTED) MARTHA S. SIEGEL		
APPROVED BY (DIRECTOR'S REPRESENTATIVE) <i>William S. [Signature]</i>		DATE APPROVED 5-10-99	PERMIT NUMBER 0708



Unconsolidated Material  
Description for  
BRMT Quarry  
St. Francois County, MO

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December 11, 1995



Prepared by:

Environmental Concepts, Inc.  
821 Madison Street, Suite B  
Jefferson City, MO 65101-3453  
Telephone: (314) 636-5331  
FAX: (314) 636-5323

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The original unconsolidated overburden at the approximately 600 acre mine tailing site consisted of a thin rocky silty clay. Most of the area not covered by mine tailings has been utilized as a soil borrow area for closure of the on-site sanitary landfill. The remaining areas not utilized were determined to not be feasible as soil borrow area because of the thin soil cover which was not recoverable.

The eastern majority of the quarry area has been utilized as a soil borrow area with all of the recoverable soil removed. The portion of the quarry area utilized as a soil borrow area is shown on Photograph No. 1 and No. 2. No recoverable unconsolidated material is available in the eastern portion of the quarry area previously utilized as a soil borrow area.

The remaining western portion of the quarry area is an undisturbed area. The area was not utilized as a borrow area because of the loose surface rock, rock outcrops and thin unrecoverable soil conditions. Photograph No. 3 and No. 4 show a drainage and erosion area in the northwest portion of the quarry area depicting the thin soil and unconsolidated material conditions. Photograph No. 5 and No. 6 depict the rock outcrop and loose rock conditions along the western portion of the quarry not utilized as a borrow area. The thin soil combined with numerous loose rocks and outcrops create a situation where the minimal amount of unconsolidated material is not recoverable for segregation and use as a vegetative base.

As described, the quarry area has been utilized as a soil borrow area with all recoverable soil removed. The remaining area not utilized as a borrow area has an insufficient amount of unconsolidated material to be recoverable. Therefore, no topsoil or unconsolidated material meeting the topsoil handling requirements of 10 CSR 40-10.050(6) exists within the mine plan area.

BRMT Quarry  
St. Francois County, MO

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Photograph No. 1 - Eastern Portion of Quarry  
Soil Borrow Area



Photograph No. 2 - Eastern Portion of Quarry  
Soil Borrow Area

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Photograph No. 3 - Northwest Portion of Quarry  
Drainage / Erosion Area  
Shallow Unconsolidated Material



Photograph No. 4 - Northwest Portion of Quarry  
Drainage / Erosion Area  
Shallow Unconsolidated Material

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JULI LAND  
COMMISSION



Photograph No. 5 - Western Portion of Quarry  
Rock Outcrop / Loose Rock /  
Thin Soil Conditions



Photograph No. 6 - Western Portion of Quarry  
Rock Outcrop / Loose Rock /  
Thin Soil Conditions

The Doe Run Company  
BRMT Quarry - St. Fr  
0708  
NW 1/4, Sec. 36, T37

Prepared by: John D  
Environmental Concep



Access to site off  
1 MILE  
R4E1/7000-E  
16 32'50"  
15  
14 (FLAT RIVER)  
7859 / SE  
SCALE 1:24,000  
0  
12  
35  
13  
33 RANDOLPH  
34  
35  
36

DETAIL MAP

NOTES:

1. THE QUARRY IS LOCATED ON AN APPROXIMATE 600 ACRE TRACT WHICH IS PRIMARILY COVERED WITH MINE TAILINGS AND IS A SUPERFUND REMEDIATION SITE. THE DOE RUN COMPANY OWNS THE S.E. PORTION OF THE SITE AND THE ST. FRANCOIS COUNTY ENVIRONMENTAL AUTHORITY OWNS THE REMAINDER OF THE PROPERTY, INCLUDING THE AREA OF AND ADJACENT TO THE MINE PLAN AREA.
2. THE MINE TAILINGS BOUNDARY AS SHOWN IS ALSO AN APPROXIMATION OF THE PROPERTY BOUNDARIES BUT IS NOT TO SCALE.
3. THERE ARE NO PUBLIC ROADS LOCATED WITHIN 100 FEET OF THE PERMIT AREA.
4. THE BIG RIVER IS LOCATED APPROXIMATELY 150 FEET SOUTHWEST OF THE PERMIT AREA. THE LENGTH OF THE BIG RIVER SHOWN IS NOT TO SCALE.

*100% OF AREA WILL BE RECLAIMED  
TO AN INDUSTRIAL SITE TY MERRIS  
5-8899  
WSE*

2.5 ACRE - CURRENTLY PERMITTED QUARRY  
+ 0.5 ACRE - SPOIL AREA  
+ 2.0 ACRE - QUARRY EXPANSION  
-----  
5.0 ACRE - PERMIT AREA AND LONG  
TERM MINE PLAN

